

WE CLAIM:

1. A method of determining data, comprising the steps of:

(a) displaying a handbook on a computer display screen, said handbook including a left page, a right page, and at least one binder ring interconnecting the left page to the right page;

(b) locating a page in said handbook being displayed on said computer display screen;
and

(c) determining said data from said page in said handbook being displayed on said computer display screen, said data determined during the determining step (c) being displayed on said computer display screen.

2. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering a first unit in a first databox on said page in said handbook being displayed on said computer display screen; and

converting said first unit to a second unit; said second unit being displayed in a second databox on said page in said handbook being displayed on said computer display screen.

3. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering one or more pump parameters in one or more databoxes on said page in said handbook being displayed on said computer display screen; and

calculating pump related data in response to said pump parameters, said pump related data being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

4. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering one or more tank dimensions in one or more databoxes on said page in said handbook being displayed on said computer display screen; and

calculating tank related data in response to said tank dimensions, said tank related data being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

5. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

enabling a search window on said computer display screen;

entering search parameters in said search window; and

displaying said data in response to the step of entering said search parameters.

6. The method of claim 5, wherein said data comprises a plurality of suppliers and a corresponding plurality of brand names associated with tubular goods adapted to be disposed in a wellbore.

7. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook data pertaining to one of a length of pipe or an effective stretch of said pipe in one or more databoxes being displayed on said computer display screen; and

calculating data pertaining to the other of said length of pipe or said effective stretch of said pipe, said other of said length of pipe or said effective stretch of said pipe being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

8. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

locating an outer diameter and a weight and an inner diameter of a tubing on said page in said handbook being displayed on said computer display screen; and

determining a capacity and a displacement of said tubing on said page in said handbook being displayed on said computer display screen.

9. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook a set of dimensions associated with an inner tubing and an outer tubing or casing in a wellbore; and

calculating said data in response to said set of dimensions, said data including one or more of a volume for a unit length, a metal displacement of the outer tubing or casing, a metal displacement of the inner tubing, a volume for a given depth, and a depth for a given volume, said data being displayed on said computer display screen.

10. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook a proppant concentration and water density value into said computer;

obtaining into said page in said handbook a specific gravity of said proppant from a database of said computer; and

calculating a density of a resultant slurry in response to said proppant concentration and water density value and said specific gravity of said proppant, said density of said resultant slurry being displayed on said computer display screen.

11. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook a proppant type and a pump schedule into said computer;

determining a set of properties of said proppant from a database in said computer; and

calculating a gate percentage opening in response to the set of properties of said proppant and said pump schedule, said gate percentage opening being displayed on said computer display screen.

12. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook properties of a proppant into said computer;

entering into said page in said handbook a configuration of a wellbore; and

calculating an amount of said proppant remaining in a tubular in said wellbore, said amount of said proppant remaining in a tubular being displayed on said computer display screen.

13. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

(a) entering into said page in said handbook data relating to a construction of a cement blend;

(b) selecting a proper blend used during the calculating step (e), the selecting step (b) including selecting said cement blend of step (a) or selecting a neat cement;

(c) selecting additives to be added to the blend; and

(d) determining a description of slurry, the step of determining said description of said slurry including,

(e) calculating one or more of slurry yield, mix water requirements, base fluid requirements, and mix fluid values, said description of said slurry being displayed on said computer display screen.

14. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook values relating to a casing diameter associated with a casing in a wellbore, a weight of said casing, and a depth of said casing; and

determining, in response to the entering step, if a pumping pressure at a surface of said wellbore will cause said casing to unseat and further determining a critical surface pressure above which said casing will unseat, said critical surface pressure being displayed on said computer display screen.

15. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook a Hydrochloric Acid (HCL) concentration, and

determining, from said HCL concentration, a specific gravity of said HCL and a density of said HCL, said specific gravity and said density being displayed on said computer display screen.

16. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

entering into said page in said handbook one of an API oil gravity value and a specific gravity of oil value, and

calculating the other of said API oil gravity value and said specific gravity of oil value, said other of said API oil gravity value and said specific gravity of oil value being displayed on said computer display screen.

17. The method of claim 1, wherein the determining step (c) for determining said data from said page in said handbook being displayed on said computer display screen comprises the steps of:

selecting from said page in said handbook a desired amount of salt from a particular weight of solution on said page in said handbook on the condition that said particular weight of solution is located on said page in said handbook;

locating on said page in said handbook a first weight of solution associated with a first amount of salt and a second weight of solution associated with a second amount of salt, where said first weight of solution is greater than said particular weight of solution and said second weight of solution is less than said particular weight of solution, and interpolating between the first and second different weights of solution to determine said desired amount of said salt having a value which lies between the first and second amounts of salt on the condition that said particular weight of solution is not located on said page in said handbook; and

displaying said desired amount of said salt on said computer display screen.

18. A method of constructing a wellbore diagram, comprising the steps of:

(a) displaying a handbook on a computer display screen; and

(b) drawing said wellbore diagram on said handbook being displayed on said computer display screen,

said wellbore diagram being constructed in response to the drawing step (b).

19. The method of constructing a wellbore diagram of claim 18, wherein the drawing step (b) further comprises the steps of:

(b1) locating a page in said handbook and clicking on a particular icon located on said page of said handbook being displayed on said computer display screen in response to the displaying step (a);

(b2) displaying a notepad on said computer display screen in response to the clicking step (b1); and

(b3) drawing said wellbore diagram on said notepad being displayed on said computer display screen, said wellbore diagram being constructed on said computer display screen following the drawing step (b3).

20. A program storage device readable by a machine tangibly embodying a program of instructions executable by the machine to perform method steps for determining data, said method steps comprising:

(a) displaying a handbook on a display screen of said machine, said handbook including a left page, a right page, and at least one binder ring interconnecting the left page to the right page;

(b) displaying a page in said handbook on said display screen of said machine in response to an input instruction; and

(c) determining said data from said page in said handbook being displayed on said display screen of said machine in response to a set of input data and a further set of data stored in a database, said data determined during the determining step (c) being displayed on said display screen of said machine.

21. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving a first unit in a first databox on said page in said handbook being displayed on said computer display screen; and

converting said first unit to a second unit, said second unit being displayed in a second databox on said page in said handbook being displayed on said computer display screen.

22. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving one or more pump parameters in one or more databoxes on said page in said handbook being displayed on said computer display screen; and

calculating pump related data in response to said pump parameters, said pump related data being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

23. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving one or more tank dimensions in one or more databoxes on said page in said handbook being displayed on said computer display screen; and

calculating tank related data in response to said tank dimensions, said tank related data being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

24. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

enabling a search window on said computer display screen;

receiving search parameters in said search window; and

displaying said data in response to the step of entering said search parameters.

25. The program storage device of claim 24, wherein said data comprises a plurality of suppliers and a corresponding plurality of brand names associated with tubular goods adapted to be disposed in a wellbore.

26. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook data pertaining to one of a length of pipe or an effective stretch of said pipe in one or more databoxes being displayed on said computer display screen; and

calculating data pertaining to the other of said length of pipe or said effective stretch of said pipe, said other of said length of pipe or said effective stretch of said pipe being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

27. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

locating an outer diameter and a weight and an inner diameter of a tubing on said page in said handbook being displayed on said computer display screen; and

determining a capacity and a displacement of said tubing on said page in said handbook being displayed on said computer display screen.

28. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook a set of dimensions associated with an inner tubing and an outer tubing or casing in a wellbore; and

calculating said data in response to said set of dimensions, said data including one or more of a volume for a unit length, a metal displacement of the outer tubing or casing, a metal displacement of the inner tubing, a volume for a given depth, and a depth for a given volume, said data being displayed on said computer display screen.

29. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook a proppant concentration and water density value into said computer;

obtaining a specific gravity of said proppant from a database of said computer; and

calculating a density of a resultant slurry in response to said proppant concentration and water density value and said specific gravity of said proppant, said density of said resultant slurry being displayed on said computer display screen.

30. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook a proppant type and a pump schedule into said computer;

determining a set of properties of said proppant from a database in said computer; and

calculating a gate percentage opening in response to the set of properties of said proppant and said pump schedule, said gate percentage opening being displayed on said computer display screen.

31. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook properties of a proppant into said computer;

receiving into said page in said handbook a configuration of a wellbore; and

calculating an amount of said proppant remaining in a tubular in said wellbore, said amount of said proppant remaining in a tubular being displayed on said computer display screen.

32. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

(a) receiving into said page in said handbook data relating to a construction of a cement blend;

(b) determining a proper blend, the determining step (b) including determining said cement blend of step (a) or determining a neat cement;

(c) selecting additives to be added to the blend; and

(d) determining a description of slurry, the step of determining said description of said slurry including,

(e) calculating one or more of slurry yield, mix water requirements, base fluid requirements, and mix fluid values, said description of said slurry being displayed on said computer display screen.

33. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook values relating to a casing diameter associated with a casing in a wellbore, a weight of said casing, and a depth of said casing; and

determining, in response to the receiving step, if a pumping pressure at a surface of said wellbore will cause said casing to unseat and further determining a critical surface pressure above which said casing will unseat, said critical surface pressure being displayed on said computer display screen.

34. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook a Hydrochloric Acid (HCL) concentration, and

determining, from said HCL concentration, a specific gravity of said HCL and a density of said HCL, said specific gravity and said density being displayed on said computer display screen.

35. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

receiving into said page in said handbook one of an API oil gravity value and a specific gravity of oil value, and

calculating the other of said API oil gravity value and said specific gravity of oil value, said other of said API oil gravity value and said specific gravity of oil value being displayed on said computer display screen.

36. The program storage device of claim 20, wherein the determining step (c), for determining said data from said page in said handbook being displayed on said display screen of said machine, further comprises:

determining from said page in said handbook a desired amount of salt from a particular weight of solution on said page in said handbook on the condition that said particular weight of solution is located on said page in said handbook;

determining on said page in said handbook a first weight of solution associated with a first amount of salt and a second weight of solution associated with a second amount of salt, where said first weight of solution is greater than said particular weight of solution and said second weight of solution is less than said particular weight of solution, and interpolating between the first and second different weights of solution to determine said desired amount of said salt having a value which lies between the first and second amounts of salt on the condition that said particular weight of solution is not located on said page in said handbook; and

displaying said desired amount of said salt on said computer display screen.

37. A program storage device readable by a machine tangibly embodying a program of instructions executable by the machine to perform method steps for constructing a wellbore diagram, said method steps comprising:

(a) displaying a handbook on a view screen of said machine; and

(b) in response to one or more input instructions, displaying said wellbore diagram on said handbook that is being displayed on said view screen of said machine,

said wellbore diagram being constructed in response to the displaying step (b).

38. The program storage device of claim 37, wherein the displaying step (b) further comprises:

(b1) in response to a first input instruction, displaying a page in said handbook being displayed on said view screen in response to the displaying step (a);

(b2) in response to a second input instruction, displaying a notepad on said page in said handbook that is being displayed on said view screen of said machine; and

(b3) in response to a third input instruction, displaying said wellbore diagram on said notepad being displayed on said view screen of said machine,

said wellbore diagram being constructed on said view screen in response to the displaying step (b3).

39. A system adapted for determining data, comprising:

apparatus adapted for displaying a handbook on a computer display screen, said handbook including a left page, a right page, and at least one binder ring interconnecting the left page to the right page;

apparatus adapted for locating a page in said handbook being displayed on said computer display screen; and

apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen, said data being displayed on said computer display screen.

40. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving a first unit in a first databox on said page in said handbook being displayed on said computer display screen; and

apparatus adapted for converting said first unit to a second unit, said second unit being displayed in a second databox on said page in said handbook being displayed on said computer display screen.

41. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving one or more pump parameters in one or more databoxes on said page in said handbook being displayed on said computer display screen; and

apparatus adapted for calculating pump related data in response to said pump parameters, said pump related data being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

42. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving one or more tank dimensions in one or more databoxes on said page in said handbook being displayed on said computer display screen; and

apparatus adapted for calculating tank related data in response to said tank dimensions, said tank related data being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

43. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for enabling a search window on said computer display screen;

apparatus adapted for receiving search parameters in said search window; and

apparatus adapted for displaying said data in response to the receipt of said search parameters.

44. The system of claim 43, wherein said data comprises a plurality of suppliers and a corresponding plurality of brand names associated with tubular goods adapted to be disposed in a wellbore.

45. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook data pertaining to one of a length of pipe or an effective stretch of said pipe in one or more databoxes being displayed on said computer display screen; and

apparatus adapted for calculating data pertaining to the other of said length of pipe or said effective stretch of said pipe, said other of said length of pipe or said effective stretch of said pipe being displayed in one or more additional databoxes on said page in said handbook being displayed on said computer display screen.

46. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for locating an outer diameter and a weight and an inner diameter of a tubing on said page in said handbook being displayed on said computer display screen; and

apparatus adapted for determining a capacity and a displacement of said tubing on said page in said handbook being displayed on said computer display screen.

47. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook a set of dimensions associated with an inner tubing and an outer tubing or casing in a wellbore; and

apparatus adapted for calculating said data in response to said set of dimensions, said data including one or more of a volume for a unit length, a metal displacement of the outer tubing or casing, a metal displacement of the inner tubing, a volume for a given depth, and a depth for a given volume, said data being displayed on said computer display screen.

48. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook a proppant concentration and water density value into said computer;

apparatus adapted for obtaining into said page in said handbook a specific gravity of said proppant from a database of said computer; and

apparatus adapted for calculating a density of a resultant slurry in response to said proppant concentration and water density value and said specific gravity of said proppant, said density of said resultant slurry being displayed on said computer display screen.

49. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook a proppant type and a pump schedule into said computer;

apparatus adapted for determining a set of properties of said proppant from a database in said computer; and

apparatus adapted for calculating a gate percentage opening in response to the set of properties of said proppant and said pump schedule, said gate percentage opening being displayed on said computer display screen.

50. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook properties of a proppant;

apparatus adapted for receiving into said page in said handbook a configuration of a wellbore; and

apparatus adapted for calculating an amount of said proppant remaining in a tubular in said wellbore, said amount of said proppant remaining in a tubular being displayed on said computer display screen.

51. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook data relating to a construction of a cement blend;

apparatus adapted for selecting a proper blend including selecting said cement blend or a neat cement;

apparatus adapted for selecting additives to be added to the proper blend; and

apparatus adapted for determining a description of slurry including,

apparatus adapted for calculating one or more of a slurry yield, mix water requirements, base fluid requirements, and mix fluid values, said description of said slurry being displayed on said computer display screen.

52. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook values relating to a casing diameter associated with a casing in a wellbore, a weight of said casing, and a depth of said casing; and

apparatus adapted for determining whether a pumping pressure at a surface of said wellbore will cause said casing to unseat and for determining a threshold surface pressure above which said casing will unseat, said threshold surface pressure being displayed on said computer display screen.

53. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for entering into said page in said handbook a Hydrochloric Acid (HCL) concentration, and

apparatus adapted for determining, from said HCL concentration, a specific gravity of said HCL and a density of said HCL, said specific gravity and said density being displayed on said computer display screen.

54. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for receiving into said page in said handbook one of an API oil gravity value and a specific gravity of oil value, and

apparatus adapted for calculating the other of said API oil gravity value and said specific gravity of oil value, said other of said API oil gravity value and said specific gravity of oil value being displayed on said computer display screen.

55. The system of claim 39, wherein said apparatus adapted for determining said data from said page in said handbook being displayed on said computer display screen comprises:

apparatus adapted for selecting from said page in said handbook a desired amount of salt from a particular weight of solution on said page in said handbook on the condition that said particular weight of solution is located on said page in said handbook;

apparatus adapted for locating on said page in said handbook a first weight of solution associated with a first amount of salt and a second weight of solution associated with a second amount of salt, where said first weight of solution is greater than said particular weight of solution and said second weight of solution is less than said particular weight of solution, and apparatus adapted for interpolating between the first and second different weights of solution to determine said desired amount of said salt having a value which lies between the first and second amounts of salt on the condition that said particular weight of solution is not located on said page in said handbook; and

apparatus adapted for displaying said desired amount of said salt on said computer display screen.

56. A system adapted for constructing a wellbore diagram, comprising:

apparatus adapted for displaying a handbook on a computer display screen; and

apparatus adapted for drawing and constructing said wellbore diagram on said handbook being displayed on said computer display screen.

57. The system of claim 56, wherein said apparatus adapted for drawing said wellbore diagram on said handbook being displayed on said computer display screen comprises:

apparatus adapted for displaying a page in said handbook on said computer display screen;

apparatus adapted for displaying a notepad over said page in said handbook being displayed on said computer display screen; and

apparatus adapted for drawing and constructing said wellbore diagram on said notepad which is being displayed on said computer display screen.